

ABSTRACT

A reduction in the formation or presence of peroxides in middle distillate fuels is obtained through the combination of a hydrocarbon additive with the fuel. Specifically, the middle distillate fuel is blended with one or more oxygenates. The hydrocarbon additive includes a polar function group and a tertiary hydrogen beta to the functional group. Middle distillate fuels incorporating the additive, the additive itself, and methods using the additive all retard the formation of or reduce the presence of peroxides in the fuel. The reduction of peroxides improves the durability of fuels systems elastomers, enhances fuel stability and color durability, and reduces the formation of fuel sediment.